National Institute of Environmental Health Sciences

Seroprevalence of leptospirosis and risk factor analysis in flood-prone rural areas in Lao PDR

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Year: 2008

Journal: The American Journal of Tropical Medicine and Hygiene. 78 (6): 957-961

Abstract:

A cross-sectional seroprevalence study on leptospirosis, using microscopic agglutination test (MAT), was conducted in rural villages in Khammouane Province, Lao People's Democratic Republic, in December 2006. The overall prevalence of leptospiral infection among 406 subjects was 23.9% (95% confidence interval [CI] 19.7-28.0%). Independent risk factors for the infection, identified by multivariate logistic regression, were male sex (odds ratio [OR], 1.92; 95% CI: 1.24-2.98), recent flooding on one's own property (OR, 2.12; 95% CI: 1.25-3.58), and collecting wood in the forest (OR, 1.90; 95% CI: 1.17-3.09). Age, occupation, and animal ownership were not associated with seropositivity. Flooding was associated with the risk of infection particularly for women, whose behaviors or activities involving contact with floodwater were presumed to play an important role. This study showed that leptospirosis is endemic in Khammouane Province and that local flooding plays an important role in the transmission of the disease.

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Resource Description

Exposure : ☒

weather or climate related pathway by which climate change affects health

Extreme Weather Event

Extreme Weather Event: Flooding

Geographic Feature: ☒

resource focuses on specific type of geography

Rural, Tropical

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: Other Asian Country

Other Asian Country: Laos

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: Leptospirosis

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Elderly, Workers

Other Vulnerable Population: Women

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified